Traditional and Health-Related Philanthropy

Bekkers, René

Published in:
Social Psychology Quarterly

DOI:
10.1177/019027250606900404

Social Psychology Quarterly

Volume 69 Number 4 December 2006

Articles

Notes

A Journal of the American Sociological Association

SOCIAL PSYCHOLOGY QUARTERLY

Volume 69, Number 4 December 2006

CONTENTS

ARTICLES

NOTES

A JOURNAL OF THE AMERICAN SOCIOLOGICAL ASSOCIATION

Social Psychology Quarterly
2006, Vol. 69, No. 4, 349–366

Traditional and Health-Related Philanthropy: The Role of Resources and Personality*

RENÉ BEKKERS
Utrecht University

I study the relationships of resources and personality characteristics to charitable giving, postmortem organ donation, and blood donation in a nationwide sample of persons in households in the Netherlands. I find that specific personality characteristics are related to specific types of giving: agreeableness to blood donation, empathic concern to charitable giving, and prosocial value orientation to postmortem organ donation. I find that giving has a consistently stronger relation to human and social capital than to personality. Human capital increases giving; social capital increases giving only when it is approved by others. Effects of prosocial personality characteristics decline at higher levels of these characteristics. Effects of empathic concern, helpfulness, and social value orientations on generosity are mediated by verbal proficiency and church attendance.

Why do people engage in behavior that benefits others at a cost to themselves, labeled prosocial behavior? Sociologists and personality psychologists differ widely in their answers to this fundamental question. From both perspectives, I investigate determinants of three specific examples of prosocial behavior that usually benefit unknown recipients: donations of money (traditional philanthropy), blood donation, and postmortem organ donation (labeled health-related philanthropy after Meslin and Quaid 2004). These examples of prosocial behavior are puzzling because they cannot be explained easily by the motive of direct reciprocity (Gouldner 1960), unlike many other forms of helping behavior (Elster 1989).

In sociology, Wilson and Musick (1997) formulated an "integrated theory of volunteer work" to explain why people give their time freely for the benefit of others. This theory focuses on the effects of different types of resources on volunteering: I generalize it to explain why people freely give their money or body parts to benefit unknown others. In personality psychology, the Five-Factor Model (McCrae and John 1992) has been advocated as a general framework for studying individual differences in personality. In addition, personality psychologists have shown that aspects of the "prosocial personality" (Penner et al. 1995) are related to prosocial behavior. Sociologists and personality psychologists have developed these perspectives in relative isolation; as a result, the relative strength of resources and of personality is unknown. In the present paper I investigate the usefulness of the personality perspective and the resource perspective for understanding donations of money, blood, and organs.

THEORY AND HYPOTHESES

The Resource Perspective

The basic idea of the integrated theory of volunteer work is that, in order to give, people must be able to give. To be productive workers, volunteers require certain resources. Wilson and Musick (1997) argue that human, social, and cultural capital are relevant resources for effective volunteering.

Human capital refers to personal characteristics which make people productive in the labor market and in which they may invest. Reading and writing skills, as well as organizational and management skills are forms of human capital that are useful for volunteers in various contexts—for instance, in political organizations (Brady, Verba and Schlozman 1995).

* Research for this article was supported by Grant 425-12-002 from the Netherlands Organization for Scientific Research (NWO). I thank Mark Wilhelm for suggestions on methods to test the hypotheses. Direct all correspondence to René Bekkers, ICS/Department of Sociology, Heidelberglaan 2, 3584 CS Utrecht, The Netherlands; r.bekkers@fss.uu.nl.

Social capital refers to resources of others that people may access through social networks (Lin 2001). Social networks make individuals not only more accessible for attempts at mobilization by voluntary associations, but also more valuable (Brady, Schlozman, and Verba 1999). In addition, social networks exert normative pressure on individuals to volunteer, especially in religious communities (Bekkers 2003; Jackson et al. 1995).

Wilson and Musick (1997) mention morality and civic-mindedness as forms of "cultural capital" that could be relevant resources for volunteers. These are not forms of capital in the usual sense, however. Money is capital because it can be earned by individuals, because they may exchange it with others in a market, and because money can be exchanged for other things. In contrast, civic values cannot be earned or exchanged.

Wilson and Musick's theory on the role of resources for volunteering can be generalized to explain other forms of prosocial behavior as well. Like volunteering, donations of money and body parts are transfers of individual citizens' resources to some collective goal, usually through an intermediary nonprofit organization. As in the case of volunteering, the availability of resources in the form of financial and human capital lowers the costs of giving and increases the benefits. Financial resources (financial capital) obviously reduce the costs of charitable giving: for those earning higher incomes, a $100 donation to a nonprofit organization is less costly than for persons with lower incomes. Because blood donation and registration as a postmortem organ donor do not cost money, financial resources are not expected to be related to blood and organ donation. Therefore I offer a reasonable hypothesis:

Greater availability of financial resources promotes traditional but not health-related philanthropy.

Human capital facilitates traditional and health-related philanthropy. In the long run, collective goods produced by nonprofit organizations often benefit large groups in society or society as a whole. The level of cognitive complexity required to take the long-term perspective and to identify with the needs of distant others is reached more easily by individuals with greater human capital. Hauser (2000) and Hillygus (2005) show that verbal proficiency increases membership in voluntary associations. Because traditional and health-related philanthropy are even stronger examples of resource transfers than mere membership, I hypothesize:

Higher verbal proficiency promotes traditional and health-related philanthropy.

Health is another aspect of human capital: healthy people are more productive volunteers. Obviously, health also is an important resource for health-related philanthropy: to give blood, donors must meet certain health standards. Health also could promote postmortem organ donation because persons in poor health may expect that donation of their organs will not be effective, and therefore will refrain from such donation. On the other hand, a chronic health problem could increase awareness of the need for organ donors. Mocan and Tekin (2005) found that these problems increase the willingness to be an organ donor among adolescents. Therefore, I hypothesize:

Health promotes blood donation but not traditional philanthropy.

Social capital obtained from networks facilitates prosocial behavior not only by lowering costs or increasing benefits of giving, but also by increasing the likelihood of being asked for contributions. Nonprofit organizations use social networks to mobilize support (Brady et al. 1999): those with more extensive networks are more likely to be asked to contribute. The same holds for blood donation: a large majority of new blood donors are recruited by existing donors (Drake, Finkelstein, and Sapolsky 1982). Extensive networks are not very likely to increase organ donation because existing donors seldom work to recruit postmortem organ donors, at least in the Netherlands.

Networks also facilitate prosocial behavior because they enforce social norms that prescribe such behavior, and individuals want to avoid disapproval for a failure to give. If detected, violation of norms in cohesive networks can be costly. In rural environments, noncompliance can be noticed more easily

than in urban settings (Steblay 1987). In keeping with this idea, a study in the United States showed that blood donation was more common on smaller than on larger college campuses (Foss 1983). Traditional philanthropy also is more common in smaller communities than in large urban areas (Putnam 2000). Therefore I test this hypothesis:

Individuals living in larger communities are less likely than those in smaller communities to engage in traditional and health-related philanthropy.

Religious involvement is another source of social capital that facilitates prosocial behavior. Protestants give more money to charitable causes than do Catholics and the nonreligious (Park and Smith 2000; Reed and Selbee 2001). This difference is rooted not only in the greater degree of cohesion in religious networks, but also in stricter norms for charitable giving (Bekkers 2003). Healy (2000) found that religious persons are more likely than the nonreligious to give blood. Religious norms prescribe donation of money and blood, but not postmortem organ donation. Although none of the major religions explicitly disapproves of postmortem organ donation, religious beliefs in the afterlife and concerns for next of kin discourage such giving (Sanders 2003). In the United States, Catholics are less likely than the nonreligious to carry donor cards (Mocan and Tekin, 2005). In sum, I hypothesize:

Religious involvement heightens the likelihood of donation of money and blood and increases the amount of money donated, but decreases the likelihood of organ donation.

The Personality Perspective: The Five-Factor Model

Resource theorists assume that "the desire to do good is more or less evenly distributed, but that the resources to fulfill that desire are not" (Wilson and Musick 1999:244). This assumption is disputed in personality psychology. Personality refers to an enduring system of characteristics that individuals carry from one situation to another, which affects their behavior across these contexts. In the past decades, the five-factor model (FFM; McCrae and John 1992) has become a generally accepted framework for the study of personality. The "Big Five" are openness, conscientiousness, extraversion, agreeableness, and neuroticism. Such traits are fairly stable over time (Ardelt 2000) and affect behavior in a wide variety of areas.

Personality influences prosocial behavior in two ways. First, personality characteristics determine the preferences for specific outcomes in a given situation involving choice (Caplan 2003). When faced with the choice between contributing money to a charity or not, those who are more concerned with other people's welfare are more likely to contribute. In the FFM, individuals differ in their desire to do good. Over time and across different social contexts, some people are more helpful than others because of personality characteristics that increase the value of giving, to them, of giving. Personality psychologists argue that individuals with a "prosocial personality" are more likely than others to engage in prosocial behavior (Graziano and Eisenberg 1997; Oliner and Oliner 1988; Penner et al. 1995). It seems likely that prosocial preferences are important for helping behaviors that result in little or no material gain (Graziano and Eisenberg 1997).

Second, personality characteristics determine which situations are attractive to people because people usually select situations that fit their personality (Buss 1987). Thus persons with greater empathic concern for others choose to engage in volunteer jobs that enable them to express such concern, as in caring tasks, and avoid jobs that require suppression of empathy (Davis et al. 1999). Bekkers (2005) found that persons with higher levels of empathic concern are more likely to volunteer because they are more strongly attracted to attending religious services, where they are more likely to be asked (Bekkers 2003). In general, prosocial personality characteristics should lead people to select situations that enable them to express these traits in overt behavior.

Personality psychologists disagree about the aspects constituting the prosocial personality. Some study agreeableness (Graziano and Eisenberg 1997), others study prosocial value orientations (Van Lange 2000), and still

others study empathy (Davis 1994; Penner 2002).

Agreeableness. Agreeableness is one of the Big Five; agreeable persons are described as more friendly, helpful, sympathetic, and cooperative in a variety of contexts. Agreeableness is a trait of persons who engage in all kinds of prosocial and altruistic behaviors more often than others. This trait is conceptually related to altruistic self-identity. To some people, helping others is an important element of their sense of self; these people have an altruistic self-identity. Such individuals describe themselves as more helpful and cooperative than others. Thus self-reported agreeableness reflects an altruistic self-identity. Sustained blood donors often merge their donor role with their sense of self (Callero, Howard, and Piliavin 1987; Lee, Piliavin, and Call 1999). Over time, blood donation becomes an exemplary act that confirms this self-identity (Piliavin and Callero 1991). Agreeableness also correlates positively with actual donations in a "public good" game in a laboratory experiment (Ben-Ner et al. 2004). There is no evidence, however, showing effects of agreeableness on postmortem organ donation. It is unlikely that such a relation exists because the decision to donate organs after death, unlike blood donation and traditional philanthropy, usually is made only once in a lifetime (Healy 2004). Thus the possibilities for developing an altruistic self-identity are limited. Accordingly, I hypothesize:

Agreeableness promotes traditional philanthropy and blood donation, but not postmortem organ donation.

An altruistic self-image is one reason why people with a prosocial personality engage in prosocial behavior. Empathy and prosocial value orientations are two other aspects of this personality that should be related to such behavior.

Prosocial value orientation. Social value orientations have been used widely in experimental studies of cooperation in social dilemmas to measure the concern for equality and joint outcomes in social dilemma situations (Simpson 2004; Van Lange 1999, 2000). These orientations are measured in a hypothetical social dilemma involving an "unknown other" before the actual experiment. Respondents make a choice between several combinations of payoffs for themselves and the unknown other. Respondents who keep more points for themselves than they give away to the unknown other are labeled "proself individuals" and are assumed to be motivated primarily by their own outcomes. Respondents who choose an equal distribution are labeled "prosocials" and are assumed to be more concerned for equality and joint outcomes. Prosocials should be more likely than proself individuals to engage in traditional and health-related philanthropy because concern for equality and collective outcomes are potential motives for these behaviors. In addition, the recipients of blood, organs, and money are unknown others, as are the recipients of the points donated in the social value orientation task.

Empirically, social value orientations are related positively to cooperation in experimental social dilemma games (e.g., Kuhlman and Marshello 1975; McClintock and Liebrand 1988) and to charitable giving in everyday life (Van Lange et al. 2003). From this research tradition I hypothesize:

Prosocial value orientations promote traditional and health-related philanthropy.

Empathy. Empathy is another reason why some people are more likely than others to give to strangers. Empathy refers to (1) the cognitive capacity to take the perspective of others and (2) the emotional responsiveness to the well-being of others. The cognitive aspect of empathy is often called perspective taking; the emotional aspect is called empathic concern (Davis 1994). Penner and associates (1995) argue that empathy is the key characteristic of persons with an altruistic personality. Seeing that people are in need, more empathically concerned persons will be more willing to share their resources with the less fortunate (Eisenberg et al. 1989). Empathy is related positively to a variety of helping behaviors (Eisenberg et al. 1989; Penner et al. 1995) and volunteering behaviors (Bekkers 2005; Penner 2002; Penner and Finkelstein 1998).

Very little research is available on the relationship between empathy and donations

of money, blood, and organs. A series of experimental studies gives some guidance, however. Batson et al. (1986) show that the effect of empathic concern is limited to situations where people may not easily escape the helping situation and are less able to avoid disapproval from themselves or others for not helping. Because traditional philanthropy and blood donation often occur in response to personal solicitations for contributions, it is difficult to escape these helping situations without contributing, and it is hard not to contribute without someone else's noticing. Postmortem organ donation, however, does not occur in response to personal solicitation. Therefore:

> *Empathic concern and perspective taking promote traditional philanthropy and blood donation, but not postmortem organ donation.*

The Moderating Effects of Resources

It is hard to test the claim in the resource perspective that individual differences in "the desire to do good" are small compared with differences in the stock of resources on which individuals can call when indicators for resources and for preferences are not measured in comparable units. According to a testable hypothesis reflecting the same idea, much of the variance in prosocial behavior can be explained by indicators of resources, while only a minor part can be explained by personality characteristics. Such a hypothesis was formulated by Healy (2000) but is not particularly interesting for social psychologists. Analyses of the potentially mediating and moderating role of resources are much more appealing. Identifying the conditions that moderate the effects of personality characteristics on behavior is an important task for social psychologists (Carlo et al. 1991; Krahé 1992; Snyder and Ickes 1985).

In the absence of a theoretical basis for hypotheses about resources' mediation of effects of personality, I merely explore mediation effects here with a focus on moderating variables. According to the "interactionist" perspective, personality interacts with situational conditions, and the interactive effects usually are stronger than the main effects of personality characteristics (Epstein and O'Brien 1985). Ease of escape is one such variable (Batson 1998). Below I test another hypothesis, the low-cost hypothesis, on the interaction of personality with situational conditions.

The Low-Cost Hypothesis

According to the low-cost hypothesis, values, attitudes, and personality characteristics tend to strongly predict behaviors that incur low material costs. People will act upon their individual attitudes and idiosyncrasies when the costs of doing so are low, but not when substantial costs are involved. The low-cost hypothesis is not new: four decades ago Lenski (1966) argued that "altruistic action is concentrated on the level of lesser events and decisions" (p. 30). This hypothesis recently gained popularity in European "rational choice sociology" (e.g., Mensch 2000). Research on pro-environmental behavior has provided evidence for the low-cost hypothesis: when this type of behavior is "easy," such as paper recycling in neighborhoods where paper is collected frequently, it is correlated with "environmental awareness," but this is not the case when a personal sacrifice is required, such as using less water (Diekmann and Preisendörfer 1998).

The low-cost hypothesis also can be found in social psychology. In the polarized debate on the altruistic nature of empathy, one set of authors asked a rhetorical question: "Does empathy lead to anything more than superficial helping?" (Neuberg et al. 1997). They concluded: "The ability of empathic concern to predict helping is limited to deciding between providing either relatively costless help or no help at all . . . under conditions of substantial cost to the helper, empathic concern does not facilitate helping" (pp. 514–15). Although this conclusion referred to the effects of state empathic concern manipulated in the laboratory and not to individual differences in trait empathic concern, it is consistent with the low-cost hypothesis in rational choice sociology.

The low-cost hypothesis can be tested by investigating whether effects of prosocial personality characteristics increase or decrease at higher levels of these characteris-

tics. This type of test supports the low-cost hypothesis when the effects of prosocial characteristics on prosocial behaviors that involve low costs decrease at higher levels. For instance, a small initial increase in empathic concern should produce a large increase in the likelihood of postmortem organ donation; additional increases in empathic concern should produce smaller increases in this likelihood. In other words, the low-cost hypothesis predicts positive main effects and negative quadratic effects of prosocial personality characteristics.

METHODS

Sample and Data Collection

To test the hypotheses stated above, I use the Family Survey of the Dutch Population (De Graaf et al. 2000). This nationwide study employed a two-stage stratified sample of individuals in households. In the first stage, the investigators drew a random sample of municipalities in the Netherlands, stratified according to level of urbanization. In the second stage, they drew a sample of persons from the population registers of these municipalities. Because the survey focused on family issues, sampled individuals who were living with a partner in the same household were included in the study only when the partner also agreed to participate. Participants comprised 723 primary respondents as well as their partners. In addition, 141 individuals who did not have a partner agreed to participate. In total, 1,587 respondents were included in the study. The response rate was 40.6 percent.

This response rate is somewhat low for two reasons. First, households could participate in the survey only if both spouses were willing to take part in separate personal interviews, which lasted about 1.5 hour each. Second, response rates in the Netherlands are generally lower than in other countries (Stoop 2005). Respondents were not paid for participation. On key demographic characteristics the sample was representative of the Dutch population except for the level of education, which was included in the analyses as an independent variable (for additional details see De Graaf et al. 2000). Because these observations are clustered within households, an ordinary least squares regression model would produce standard errors that are biased downward. To correct this bias, I used the Huber/White sandwich estimator (Huber, 1967).

Measures

The respondents completed a computer-assisted personal interview as well as a written questionnaire. In the interview, data were obtained on decisions regarding blood and postmortem organ donations, and on most of the sociodemographic variables. The questionnaire contained questions on charitable giving and on personality characteristics, because these areas are especially vulnerable to social desirability.

Traditional philanthropy was measured with the question "Some people donate money to charities. Did you donate money in the previous year to voluntary associations, charities or nonprofit organizations? (Please do not include lotteries and membership dues in your response)." Almost eight respondents in 10 (78.81%) reported having made charitable donations of money in the last year. Those who reported donations subsequently reported the *amount donated* in the previous year. *Postmortem organ donation* was measured with several questions on the registration campaign that the government started in 1998. Respondents who had received a registration form indicated whether they had returned it and, if so, which decision they had made. The options were (1) donation of all organs (29.26%); (2) donation of some specific organs but not all (5.07%); (3) giving the choice to donate or not to next of kin (6.37%); and (4) refusal to donate (10.92%). Option (c) in practice seldom leads to donation because kin often refuse to donate (Brouwer and Friele 2004). Almost half of the respondents (48.37%) said they had not registered a decision on postmortem organ donation. *Blood donation* was measured with the question "Are you registered as a blood donor?" About one respondents in ten (10.61%) reported being registered as a blood donor.

I used the following measures for resources: *highest completed level of education* (in eight categories, ranging from prima-

ry school to postgraduate degree); *subjective health* (subjective evaluation of health in five categories ranging from "bad" to "excellent"); *household income* (the log-transformed sum of all sources of income for both partners; to 80 households in which neither respondent reported any source of income at all, I assigned the median value, € 23,000, incomes above € 300,000 were truncated); *wealth from income* (log-transformed wealth from income per year; missing cases were assigned the median value); a dummy variable for *homeownership,* two dummy variables for working status: *having paid work* and *working part-time* (one to 30 hours a week); *frequency of church attendance* (number of visits per year); *religious affiliation* (dummy variables for Catholic, Reformed Protestant, Rereformed Protestant ("Gereformeerd"), or other religious affiliation, with "no religious affiliation" as the reference category); and *level of urbanization* (from 0 = rural to 4 = highly urban).

Empathy was measured with six items describing emotional involvement with other people's misfortune; each ranged from 1 "does not fit me at all" to 5 "fits me completely" (a sample item was: "I often feel concerned for less fortunate people"; for a description of all items, see Davis 1994. I excluded one of the original items to reduce questionnaire length.) Factor analysis showed low communalities for two of the original items. With only four items, the reliability of the scale was adequate (alpha = .68). *Perspective taking* was measured with six items, also ranging from 1 to 5, describing the tendency to take other people's perspective (a sample item was: "When I am angry with someone, I try to take his or her perspective" (see Davis 1994). Again, I excluded one of the original items to reduce questionnaire length.) The perspective-taking scale had an alpha of .78.

I measured *social value orientations* with a slightly different procedure than in previous research because of space restrictions in the survey (for a description of the traditional method, see Van Lange et al. 1997). Respondents were asked to provide a rank order to four self-other distributions in two tables (see Bekkers 2004). These rank orders reflect the degree to which respondents tend to give away points to the unknown other or to keep them for themselves. On average, the respondents gave away 42 percent of the points to the other and kept 58 percent for themselves. To simplify the interpretation of results, I created two groups, one with respondents below the mean (n = 886, 55.8%, labeled "proself") and the other with respondents above the mean (n = 701, 44.2%, labeled "prosocial"). Comparing "proselfs" with "prosocials" is a common practice in research on social value orientations (Van Lange 2000).

Big Five personality dimensions were measured with a selection of 30 adjectives describing personal characteristics based on a factor analysis of a Dutch translation (Gerris et al. 1998) of the 100 Big Five markers developed by Goldberg (1992). Respondents were asked to what degree these adjectives applied to themselves on a scale of 1 ("Does not fit me at all") to 7 ("Fits me completely"). After removal of three items that showed loadings above .35 on multiple factors, a six-factor structure emerged (see Appendix Table A1). The first four dimensions were *extraversion* (alpha = .82, four items), *neuroticism* (alpha = .77, four items), *conscientiousness* (alpha = .87, four items), and *openness* (alpha = .80, six items). The fifth and sixth factors were subdimensions of agreeableness. Factor 5 refers to *warmth* or friendliness in interpersonal relations; Factor 6, to *helpfulness.* I saved factor scores and used them in the regression analyses.

The finding of a six-factor solution confirms recent studies in personality psychology that also have found two separate factors for agreeableness items rather than just one (Ashton and Lee 2001; Ashton, Lee, and Goldberg, 2004; Ashton et al. 2004). I use the six-factor solution because the single agreeableness score derived from the five-factor solution obscures differential effects of the two subdimensions of agreeableness. Although the hypotheses of the present paper involve only the most "prosocial" personality trait of agreeableness, I also include the other traits in the Big Five (extraversion, neuroticism, conscientiousness, openness) for exploratory purposes.

Table 1 shows correlations among empathic concern, perspective taking, and social value orientation; correlations with warmth, helpfulness, and the other four elements of the Big Five are shown. (The factor analysis constrains to zero the correlations among the six factor scores from the Big Five checklist.) All correlations among empathic concern, perspective taking, social value orientation, warmth, and helpfulness are significant at the 1 percent level, varying from .077 to .262, with the exception of the correlation between social value orientation and warmth; this is close to zero.

This pattern of correlations supports the assumption that empathic concern, perspective taking, social value orientation, warmth, and helpfulness all represent prosocial personality characteristics. The absence of a positive correlation between social value orientation and warmth is not strange because warmth refers to friendliness in interpersonal situations, and in the social value orientation measure we instructed the respondents to imagine that they were paired with an "unknown other." Table 1 also shows that empathic concern is correlated positively with extraversion, neuroticism, and openness. Perspective taking is positively correlated with conscientiousness and openness. These correlations show the importance of controlling for the four personality characteristics that are nonspecifically prosocial in estimating the relation of prosocial personality characteristics to prosocial behavior.

Analytical Strategy

Below I report results from regression analyses of donations of money, organs, and blood. I use a probit regression model for the analysis of blood donation and a multinomial logit analysis for postmortem donation decisions. Multinomial logit models are preferred in analyzing individuals' mutually exclusive choices between multiple qualitatively different options (Cramer 1991). The results show whether those who did not register a choice for postmortem organ donation (the reference category) differ from those who refused to donate, those who left the decision to kin, those who registered partial consent, and those who gave full consent for donation. To analyze charitable donations of money, I use a Heckman two- stage regression model because donations cannot be negative and because decisions to donate or not are different from decisions about how much to donate (Smith, Kehoe, and Cremer 1995).

For all three examples of philanthropy, I present two regression models. In the first model I include gender and age dummies, the Big Five personality dimensions, and individual differences in perspective taking, empathic concern, and social value orientation. In the second model I add indicators of financial resources (wage income, wealth from income, and homeownership), indicators of human capital (level of education, verbal proficiency, and subjective health), and indicators of social capital (church attendance and urbanization level). For traditional philanthropy, I estimate a third regression model including interactions between household income and prosocial personality characteristics to test the low-cost hypothesis.

Before conducting the analyses, I z-standardized all nondichotomous variables so that their effect sizes could be compared. To measure the explanatory power of personality and resources, I computed the relative increase in the proportion of variance explained by personality characteristics as the difference between the R^2 statistic in Model 1 and the R^2 statistic of a baseline model with age and gender only, relative to

Table 1. Correlations Among Measures of Personality

	EC	PT	W	H	E	N	C	O
SVO	.192***	.077**	–.030	.140***	.036	.051	.032	–.008
EC	1.000	.275***	.117***	.262***	.118***	.140***	–.005	.106***
PT	.275***	1.000	.197	.125***	–.007	–.048	.093***	.163***
Alpha	.681	.777	.755	.510	.837	.814	.868	.787

Notes: SVO = social value orientation; EC = empathic concern; PT = perspective taking; W = warmth; H = helpfulness; E = extraversion; N = neuroticism; C = conscientiousness; O = openness.
* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed)

the total increase in the proportion of variance explained (the R^2 statistic of Model 2 minus the R^2 statistic of the baseline model).

By introducing personality characteristics before indicators of resources, I give full credit to the claim that personality characteristics are stable. In addition, I can test whether effects of personality are mediated by resources. Personality characteristics are rather remote causes of behavior, while resources are more proximate determinants. Bekkers (2005) found evidence that the level of education mediates effects of emotional stability on civic engagement.

RESULTS

The results reported in Model 1 of Tables 2, 3, 4 and 5 show that those who engage in traditional and health-related philanthropy cannot easily be described as having a consistently prosocial personality. I find that warmth is typical of those who give partial consent for organ donation, but not of those who give blood or money. Helpfulness is typical of blood donors, but not of those who register for organ donation and those who engage in traditional philanthropy. In fact, helpfulness exerts an unexpected negative effect on the amount donated when empathic concern and social value orientation are introduced (see Model 2 of Table 5). Empathic concern increases the likelihood that people give to charities; it also increases generosity, but not the likelihood that people engage in blood donation or register for postmortem organ donation. A prosocial value orientation increases the probability that people give consent for postmortem donation of all organs, and also increases the amount donated to charities. Blood donors and those who engage in philanthropy, however, do not have a more prosocial value orientation than those who do not give blood or

Table 2. Probit Regression Analysis of Current Blood Donation

	Model 1		Model 2	
	dF/dx	*p*	dF/dx	*p*
Female	–.023 (.018)		–.025 (.021)	
Age 30–54	.045 (.026)†		.054 (.027)†	
Age 55 and Over	.023 (.035)		.055 (.043)	
Warmth	.003 (.008)		–.003 (.009)	
Helpfulness	.022 (.008)**		.025 (.008)**	
Extraversion	–.002 (.008)		–.001 (.008)	
Conscientiousness	–.018 (.008)*		–.018 (.008)*	
Neuroticism	–.014 (.008)		–.002 (.009)	
Openness	–.013 (.008)		–.015 (.008)†	
Perspective Taking	–.001 (.010)		.000 (.009)	
Empathic Concern	.001 (.010)		–.002 (.010)	
Social Value Orientation	–.000 (.017)		–.000 (.017)	
Education			.018 (.009)†	
Verbal Proficiency			.003 (.012)	
Subjective Health			.037 (.008)***	
No Paid Work			–.024 (.023)	
Part-time Work			.024 (.026)	
Wage Income			–.023 (.008)**	
Wealth From Income			.005 (.008)	
Homeownership			–.004 (.021)	
Church Attendance			–.002 (.011)	
Urbanization			.002 (.008)	
Catholic			.012 (.022)	
Reformed			.010 (.039)	
Rereformed			.006 (.039)	
Other Religion			–.024 (.044)	
Chi-Square (df)	24.72 (12)***		59.78 (26)***	
Pseudo-R^2	.0221		.0550	

Notes: $N = 1140$. All chi–square values are significant at $p < .000$.
† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two–tailed)

Table 3. Multinomial Logit Regression Analysis of Postmortem Organ Donation

	Full Donors		Partial Donors	
	Model 1 Coeff. (SE) *p*	Model 2 Coeff. (SE) *p*	Model 1 Coeff. (SE) *p*	Model 2 Coeff. (SE) *p*
Female	.057 (.102)	.148 (.143)	.361 (.226)	.279 (.312)
Age 30–54	–.179 (.220)	–.388 (.238)	–.604 (.365)†	–.867 (.400)*
Age 55 and Over	–.418 (.269)	–.458 (.308)	–1.294 (.519)*	–1.254 (.568)*
Warmth	–.033 (.065)	–.033 (.070)	.284 (.147)†	.314 (.159)*
Helpfulness	–.085 (.066)	–.033 (.067)	.079 (.120)	.138 (.135)
Extraversion	.104 (.063)	.128 (.066)†	.117 (.133)	.113 (.135)
Conscientiousness	.060 (.063)	.091 (.065)	–.074 (.119)	–.042 (.126)
Neuroticism	–.174 (.067)**	–.135 (.072)*	–.202 (.137)	–.127 (.146)
Openness	–.042 (.064)	–.101 (.066)	.042 (.123)	.061 (.129)
Perspective Taking	–.044 (.070)	–.093 (.071)	.013 (.135)	–.010 (.147)
Empathic Concern	.063 (.073)	.071 (.077)	.012 (.150)	–.014 (.164)
Social Value Orientation	.275 (.132)*	.280 (.135)*	.191 (.281)	.115 (.292)
Education		.052 (.082)		.244 (.151)†
Verbal Proficiency		.248 (.096)*		.089 (.197)
Subjective Health		.014 (.071)		–.118 (.128)
No Paid Work		–.184 (.197)		–.500 (.403)
Part–Time Work		–.038 (.204)		.363 (.362)
Wage Income		.014 (.080)		.116 (.158)
Wealth From Income		.042 (.081)		–.012 (.140)
Homeownership		–.015 (.182)		.050 (.367)
Church Attendance		.002 (.114)		.052 (.178)
Urbanization		–.054 (.082)		–.056 (.183)
Catholic		–.117 (.189)		.056 (.355)
Reformed		–.708 (.338)*		.383 (.521)
Rereformed		–1.204 (.408)**		.804 (.494)†
Other Religion		–1.751 (.574)**		–.388 (.887)
Constant	–.411 (.220)†	–.089 (.239)	–1.932 (.364)***	–1.846 (.409)***

Notes: $N = 1{,}391$. All chi-square values are significant at $p < .000$. Reference category: not registered. Pseudo-R^2 of Model 1, .0233; Model 2, .0606

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two–tailed)

money. Perspective taking is not related to traditional or health-related philanthropy. This result is in line with a study of civic engagement (Bekkers 2005), which also found no relation between perspective taking and volunteering or membership of voluntary associations when other personality characteristics were controlled.

A few other effects of personality characteristics are worth mentioning as well. Extraversion increases postmortem organ donation and the amount donated to charities (when resources are controlled). Conscientiousness decreases both examples of health-related philanthropy. Neuroticism decreases postmortem organ donation and the amount donated to charities (but not when resources are controlled). Openness tends to decrease the likelihood of giving blood and of traditional philanthropy. The negative effect of conscientiousness is consistent with the finding that conscientiousness decreases civic involvement (Bekkers 2005). The negative effect of neuroticism on postmortem organ donation supports the view that end-of-life decisions are associated with fear and anxiety (Brouwer and Friele 2004).

The effects of resources on traditional and health-related philanthropy are considerably stronger than the effects of personality characteristics. The relative increase in the proportion of variance explained by all personality characteristics is 32 percent for blood donation, 27 percent for postmortem organ donation, 13 percent for the likelihood of engaging in traditional philanthropy, and 28 percent for the amount donated. Much of the variance in prosocial behavior explained in the present analyses is accounted for by differences in resources.

Table 4. Multinomial Logit Regression Analysis of Postmortem Organ Donation Continued

	Kin Decides		Refuses Donation	
	Model 1 Coeff. (SE) *p*	Model 2 Coeff. (SE) *p*	Model 1 Coeff. (SE) *p*	Model 2 Coeff. (SE) *p*
Female	.083 (.208)	.789 (.254)	.109 (.154)	.147 (.207)
Age 30–54	–.491 (.361)	–.618 (.416)	.107 (.374)	–.026 (.388)
Age 55 and Over	–.962 (.479)*	–1.158 (.562)*	.597 (.404)	.333 (.427)
Warmth	–.022 (.118)	–.044 (.124)	.096 (.100)	.112 (.100)
Helpfulness	.043 (.117)	.008 (.120)	–.010 (.098)	–.025 (.100)
Extraversion	.071 (.111)	.113 (.115)	–.164 (.090)†	–.146 (.092)
Conscientiousness	.184 (.124)	.201 (.118)†	.254 (.099)*	.258 (.100)*
Neuroticism	–.176 (.126)	–.123 (.133)	–.070 (.099)	–.062 (.102)
Openness	–.003 (.116)	–.029 (.117)	.111 (.101)	.113 (.104)
Perspective Taking	–.047 (.107)	–.104 (.113)	–.021 (.110)	.006 (.113)
Empathic Concern	.218 (.132)†	.212 (.138)	–.128 (.109)	–.148 (.105)
Social Value Orientation	.014 (.251)	.043 (.256)	.203 (.199)	.211 (.200)
Education		.115 (.140)		–.283* (.129)
Verbal Proficiency		.361 (.179)*		.222 (.152)
Subjective Health		.079 (.112)		–.057 (.098)
No Paid Work		–.092 (.312)		–.091 (.270)
Part-Time Work		–.041 (.342)		–.110 (.291)
Wage Income		–.201 (.107)†		.189 (.163)
Wealth From Income		–.060 (.140)		–.230† (.132)
Homeownership		–.338 (.362)		–.209 (.264)
Church Attendance		.010 (.176)		.382** (.139)
Urbanization		.005 (.115)		.258* (.117)
Catholic		.430 (.322)		–.045 (.261)
Reformed		–.125 (.595)		–.300 (.454)
Rereformed		–.218 (.567)		–.999† (.597)
Other Religion		–32.700 (.508)***		–1.254† (.562)
Constant	–1.566 (.368)***	–1.533 (.456)***	–1.918 (.361)***	–1.664 (.397)***

Notes: $N = 1{,}410$. Reference category: not registered.
† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed)

To get some sense of the magnitude of these differences, I estimated the mean amount donated by respondents with the highest and lowest scores for empathic concern and verbal proficiency on the amount donated, controlling for all other variables in the analysis. (These values illustrate respectively the meanings of the coefficients .257 and .428 in Table 5). The top 10 percent verbally most proficient respondents donate on average 245 euros. The bottom 15 percent donates on average 17 euros, one-fourteenth the amount donated by the highest- scoring group. The difference between respondents with high and low scores for empathic concern is considerable as well, but smaller: the top 15 percent most empathically concerned respondents donate 176 euros, about three times the mean amount donated by the bottom 14 percent (57 euros).

I find support for most of the hypotheses on the effects of resources. Traditional and health-related philanthropy are found more often among those with higher levels of human capital. Financial capital promotes traditional philanthropy only, and social capital increases traditional philanthropy but decreases health-related philanthropy.

Among the indicators of *human capital,* verbal proficiency exerts the strongest effect on traditional and health-related philanthropy. Verbal proficiency strongly increases postmortem donation of all organs and traditional philanthropy—both the likelihood of giving and the amount donated—and has a somewhat weaker effect on letting kin decide about organ donation. Subjective health increases the likelihood of blood donation, but not of postmortem organ donation. Subjective health also exerts an unexpected (but not anomalous) marginally positive effect on the amount donated.

Financial capital, in the form of wage income and wealth from income increases

Table 5. Heckman Two-Stage Regression Analysis of Charitable Donations

	Selection		Amount	
	Model 1 Coeff. (SE) *p*	Model 2 Coeff. (SE) *p*	Model 1 Coeff. (SE) *p*	Model 2 Coeff. (SE) *p*
Female	.055 (.072)	.128 (.093)	–.254 (.084)**	–.257 (.099)**
Age 30–54	.263 (.110)*	.093 (.119)	.090 (.147)***	.611 (.134)***
Age 55 and Over	–.080 (.131)	–.189 (.156)	1.039 (.184)***	.786 (.185)***
Warmth	–.032 (.039)	–.011 (.040)	–.034 (.052)	–.020 (.043)
Helpfulness	–.006 (.040)	.045 (.043)	–.126 (.056)*	–.061 (.047)
Extraversion	.042 (.037)	.070 (.038)†	.036 (.047)	.066 (.039)†
Conscientiousness	–.017 (.036)	.001 (.039)	–.040 (.047)	–.026 (.041)
Neuroticism	–.070 (.039)†	.010 (.042)	–.146 (.051)***	.022 (.045)
Openness	–.035 (.039)	–.076 (.041)†	–.022 (.046)	–.062 (.041)
Perspective Taking	–.056 (.042)	–.070 (.043)	.010 (.054)	.012 (.045)
Empathic Concern	.145 (.043)***	.107 (.044)*	.343 (.062)***	.257 (.052)***
Social Value Orientation	.109 (.076)	.073 (.080)	.266 (.096)**	.137 (.080)†
Education		.160 (.050)***		.292 (.055)***
Verbal Proficiency		.283 (.055)***		.428 (.073)***
Subjective Health		.023 (.041)		.070 (.042)†
No Paid Work		–.146 (.114)		–.066 (.129)
Part-Time Work		.046 (.122)		.142 (.119)
Wage Income		.091 (.047)†		.186 (.062)**
Wealth From Income		.089 (.047)†		.100 (.047)*
Homeownership		.035 (.100)		.098 (.107)
Church Attendance		.046 (.055)		.232 (.057)***
Urbanization		–.082 (.044)†		–.095 (.049)†
Catholic		.052 (.096)		.185 (.105)†
Reformed		.131 (.195)		.450 (.203)*
Rereformed		.215 (.195)		.886 (.178)***
Other Religion		.243 (.273)		.663 (.258)*
Constant	.430 (.113)***	.543 (.128)***	–4.427 (.169)***	–4.317 (.171)***
Pseudo/Adj. R^2	.0377	.1448	.0922	.2839

Notes: N = 1410; 362 censored observations. Pseudo-R^2 values are based on results of a probit model. Base R^2 = .0211. Adjusted R^2 from OLS model. Base R^2 = .0551. Wald tests for independent equations are 39.98 ($p < .001$) in Model 1 and 10.69 ($p < .01$) in Model 2.
† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed)

traditional philanthropy. Income, however, also decreases the likelihood of blood donation and letting kin decide about organ donation after death. These results are puzzling: they are not due to inadequate control of work status, because working hours are controlled. More research is required to explain these findings. Homeownership is not related to either traditional or health-related philanthropy.

Social capital indicators also affect prosocial behavior. A higher level of urbanization decreases traditional philanthropy, and increases the refusal to donate organs. Church attendance and Protestant denomination decrease organ donation and increase the amount donated to charities. These results generally support the hypotheses.

How Resources Mediate Effects of Personality

Many effects of personality characteristics are mediated by resources. For example, the effects of helpfulness, neuroticism, empathic concern, and social value orientation on the amount donated all decrease substantially when resources are added. Additional analyses (available on request) show that verbal proficiency decreases the effects of neuroticism, social value orientation, helpfulness, and empathic concern on traditional philanthropy. Effects of empathic concern and social value orientations on traditional philanthropy also are mediated by church attendance. In the analysis of postmortem organ donation, verbal proficiency

mediates the effects of neuroticism and extraversion.

Some Support for the Low-Cost Hypothesis

The results shown in Table 6 give some support to the low-cost hypothesis. I find four significant quadratic effects of prosocial personality traits, all in the negative direction predicted by this hypothesis. The effects of perspective taking and empathic concern on traditional philanthropy decrease at higher levels of these traits; empathic concern also exerts a decreasing marginal effect on consenting to postmortem organ donation. Thus a small initial increase in empathic concern strongly promotes engagement in traditional philanthropy, but further increases produce ever-smaller additional effects. The low-cost hypothesis is not fully supported because the main effects of perspective taking are not significantly positive and because many other quadratic effects (for example, that of helpfulness on the amount donated) are not negative. The finding that quadratic effects of prosocial personality characteristics on blood donation are not significant is in line with the low-cost hypothesis because blood donation involves more effort (showing up and spending an hour at the blood center) than to postmortem organ donation and engaging in traditional philanthropy (which often require only a signature).

DISCUSSION

Several methodological aspects of the present study may have limited the likelihood of detecting strong effects of personality characteristics. Perhaps the effects of these characteristics are underestimated because the personality measures are unreliable. Although this argument is somewhat valid for the effects of empathic concern and helpfulness (these scales had reliability coefficients of .68 and .55 respectively), it does not hold for the measures of the Big Five and perspective taking (with reliabilities ranging from .77 to .87). In addition, the effects of resources are also underestimated because of unreliability. For instance, a substantial number of respondents did not report their wage income and wealth from income; thus the

Table 6. Nonlinear Effects of Prosocial Personality Characteristics

	Donated Money	Amount Donated	Blood	Full Consent	Partial Consent	Kin Decides	Refuses
Warmth (l)	–.047 (.040)	–.105 (.056)†	.003 (.009)	–.063 (.071	.327 (.126)*	.040 (.112)	.069 (.099)
Warmth (q)	–.035 (.025)	–.019 (.041)	.002 (.005)	–.054 (.041)	.053 (.090)	.049 (.065)	.017 (.067)
Helpfulness (l)	–.025 (.044)	–.136 (.061)*	.018 (.010)	–.122 (.074)†	.063 (.139)	–.083 (.138)	.011 (.100)
Helpfulness (q)	–.032 (.023)	–.008 (.038)	–.009 (.007)	–.059 (.042)	–.080 (.085)	–.083 (.072)	.002 (.046)
Perspective Taking (l)	–.059 (.040)	.002 (.055)	–.004 (.010)	.011 (.068)	.044 (.154)	–.022 (.139)	.068 (.090)
Perspective Taking (q)	–.068 (.022)**	–.092 (.033)**	.001 (.005)	.040 (.039)	–.057 (.102)	–.120 (.090)	.091 (.057)
Empathic Concern (l)	.129 (.042)**	.314 (.063)***	–.004 (.009)	.012 (.076)	.048 (.145)	.194 (.133)	–.148 (.101)
Empathic Concern (q)	–.058 (.027)*	–.037 (.040)	.004 (.007)	–.180 (.059)**	–.100 (.111)	–.122 (.083)	–.004 (.060)

Notes: (l) refers to the linear effect of the variable; (q) refers to the nonlinear, quadratic effect.
† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two–tailed)

degree of error in the income measures is increased. As a result, the effects of these variables probably are underestimated as well.

Another issue is the validity of the social value orientation measure. Experimental studies have shown that social value orientations can be changed easily with a seemingly unrelated crossword puzzle that "primes" a cooperative or competitive frame of mind (Hertel and Fiedler 1998; Utz 2004). Because the social value orientation task was not placed at the beginning of the write-in questionnaire, participants may have been misclassified; thus the predictive power of the social value orientation measure may have been reduced. Yet if social value orientations are so responsive to subtle cues in the laboratory, they are unlikely to strongly predict prosocial behavior in everyday life.

Another potential reason why personality characteristics may have exerted only small effects is that I studied determinants of prosocial behavior in separate analyses. Epstein and O'Brien (1985) report studies showing that effects of personality characteristics become stronger when multiple examples of prosocial behavior are aggregated into one composite score. I tested this hypothesis in an ordered probit analysis of the number of prosocial behaviors engaged in (results available on request). Also in this analysis, however, personality characteristics accounted for only 35.5 percent of the total increase in the proportion of variance explained over the baseline model.

An obvious limitation of the present study, its cross-sectional design, actually will have *favored* the chances of finding effects of personality characteristics. Because personality, resources, and prosocial behavior were measured at the same point in time, I cannot rule out the possibility that prosocial behavior affects self-reports on resources and personality instead of the other way around. Correlations between personality and prosocial behavior may have been inflated when respondents adapted their self-reported personality to their levels of prosocial behavior when filling out the questionnaire.

CONCLUSION

All in all, the results presented above are reminiscent of a 35-year-old review of the debate about bystander intervention presented by Latané and Darley (1970:119–20): "Individual difference variables account for remarkably little variance in helping behaviour." It is often argued that research on helping behavior has underestimated the role of personality because of the use of experimental methods and because such research investigated mainly helping in emergencies, which is a rather atypical example of prosocial behavior (Amelang and Borkenau 1986; Kohn 1990:298; Krahé 1992; Penner et al. 1995).

In the present study, I used self-report questionnaires to investigate effects of personality on theoretically relevant examples of prosocial behavior. Although some of the personality characteristics are related to some of the forms of philanthropy (agreeableness to blood donation, empathic concern to charitable giving, and a prosocial value orientation to postmortem organ donation), none of the individual differences show a consistently positive relationship with all examples of prosocial behavior.

Donations of money, blood, and organs may seem to be governed by preferences, but the strongest predictors of traditional and health-related philanthropy are indicators of resources. Resources facilitate prosocial behavior more strongly than do prosocial personality characteristics. Verbally proficient, healthy, and more highly educated persons are more likely to be engaged in any type of philanthropy.

The relatively weak main effects of personality characteristics do not imply that personality is irrelevant for understanding prosocial behavior. On the contrary: in many cases, resources mediate effects of personality characteristics. In addition, personality characteristics often exert nonlinear effects on prosocial behavior. The negative quadratic effects of prosocial personality characteristics support the low-cost hypothesis.

Future studies should continue to test hypotheses on conditions that moderate the effects of personality on prosocial behavior. Material costs are only one variable that

moderates these effects. Other conditions that may increase the effects of personality are the collective benefits of donations (Goeree, Holt, and Laury 2002), normative ambiguity, and weak social pressure (Snyder and Ickes 1985). It is more likely that people act on their personal preferences when social norms do not provide clear guidelines on how to act and when they are subject to less social pressure to conform to these norms. Future research also should develop theories on how people select social situations on the basis of their personality characteristics. The finding that verbal proficiency mediates effects of prosocial personality characteristics could reflect a preference for learning about complex problems among persons with a prosocial personality.

Appendix Table A1. Factor Analysis of Big Five Personality Markers

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Sloppy	.779 [a]	.090	–.024	–.185	–.070	–.020
Careful	.762 [a]	–.044	–.015	.072	.105	.162
Organized	.868 [a]	.014	.053	–.033	.004	.061
Thorough	.771 [a]	–.046	.002	.086	.082	.044
Neat	.855 [a]	.038	.059	–.072	.101	.058
Systematic	.627 [a]	–.104	–.088	.154	.088	–.034
Reserved	.020	.744[a]	–.151	.059	.034	.042
Quiet	–.069	.821[a]	–.046	.036	.054	.000
Introverted	–.034	.819[a]	–.122	.064	.098	.022
Talkative	.010	.678[a]	.139	.203	.279	.144
Withdrawn	.009	.705[a]	–.333	.046	.160	.044
Nervous	–.075	–.127	.816[a]	–.004	.005	–.077
Touchy	–.041	.002	.606[a]	.095	–.165	–.015
Anxious	.080	–.005	.682[a]	–.022	.038	.219
Fearful	.031	–.150	.784[a]	–.024	–.030	.031
High-Strung	–.008	–.170	.844[a]	–.037	–.028	–.024
Imaginative	–.080	.093	.013	.708[a]	.229	–.027
Complex	.047	.079	–.071	.668[a]	.138	.219
Innovative	.039	.253	–.056	.621[a]	.163	.108
Artistic	–.033	–.060	.069	.792[a]	–.006	–.068
Creative	.073	.048	.046	.811[a]	–.009	.051
Agreeable	.070	.164	–.095	.086	.734[a]	.014
Kind	.056	.114	–.023	.130	.689[a]	.320
Sympathetic	.082	.095	–.034	.131	.791[a]	.176
Pleasant	.090	.117	–.060	.114	.799[a]	.119
Cooperative	.093	.124	.050	.114	.318	.824[a]
Helpful	.130	.061	.073	.098	.237	.854[a]
Eigenvalue	5.242	3.838	3.135	2.103	1.867	1.017
Percentage Explained	19.416	14.216	11.610	7.790	6.915	3.768

Note: Labels: Factor 1, conscientiousness; Factor 2, extraversion; Factor 3, neuroticism; Factor 4, openness; Factor 5, warmth; Factor 6, helpfulness. [a] Factor loadings > .35

REFERENCES

Amelang, Manfred and Peter Borkenau. 1986. "The Trait Concept: Current Theoretical Considerations, Empirical Facts, and Implications for Personality Inventory Construction." Pp. 7–34 in *Personality Assessment via Questionnaires: Current Issues in Theory and Measurement,* edited by Alois Angleitner and Jerry S. Wiggins. Berlin: Springer.

Ardelt, Monika. 2000. "Still Stable After All These Years? Personality Stability Theory Revisited." *Social Psychology Quarterly* 63:392–405.

Ashton, Michael C. and Kibeom Lee. 2001. "A Theoretical Basis for the Major Dimensions of Personality." *European Journal of Personality* 15:327–53.

Ashton, Michael C., Kibeom Lee, and Lewis R. Goldberg. 2004. "A Hierarchical Analysis of 1,710 English Personality-Descriptive Adjectives." *Journal of Personality and Social Psychology,* 87:707–21.

Ashton, Michael C., Kibeom Lee, Marco Perugini, Piotr Szarota, Reinout E. De Vries, Lisa Di

Blas, Kathleen Boies, and Boele De Raad. 2004. "A Six-Factor Structure of Personality-Descriptive Adjectives: Solutions From Psycholexical Studies in Seven Languages." *Journal of Personality and Social Psychology* 86:356–66.

Batson, C. Daniel. 1998. "Altruism and Prosocial Behavior." Pp. 282–316 in *Handbook of Social Psychology,* vol. 2, 3d ed., edited by Daniel T. Gilbert. New York: Random House.

Batson, C. Daniel, Michelle H. Bolen, Julie A. Cross, and Helen E. Neuringer-Benefiel. 1986. "Where Is the Altruism in the Altruistic Personality?" *Journal of Personality and Social Psychology* 50:212–20.

Bekkers, René. 2003. "De Bijdragen der Kerckelijken" (The Contributions of the Religious). Pp. 141–72 in *Geven in Nederland 2003,* edited by Theo N.M. Schuyt. Houten/Dieghem: Bohn Stafleu van Loghum.

———. 2004. "Giving and Volunteering in the Netherlands: Sociological and Psychological Perspectives." PhD dissertation, Department of Sociology, Utrecht University, The Netherlands.

———. 2005. "Participation in Voluntary Associations: Relations With Resources, Personality, and Political Values." *Political Psychology* 26:439–54.

Ben-Ner, Avner, Louis Putterman, Farmin Kong, and Dan Magan. 2004. "Reciprocity in a Two-Part Dictator Game." *Journal of Economic Behavior and Organization* 53:333–52.

Brady, Henry E., Kay Lehman Schlozman, and Sidney Verba. 1999. "Prospecting for Participants: Rational Expectations and the Recruitment of Political Activists." *American Political Science Review* 93:153–69.

Brady, Henry E., Sidney Verba, and Kay Lehman Schlozman. 1995. "Beyond SES: A Resource Model of Political Participation." *American Political Science Review* 89:271–94.

Brouwer, Wendy and Roland D. Friele. 2004. "Nederlanders Over Orgaandonatie" (The Dutch On Organ Donation). Pp. 7–100 in: *Tweede Evaluatie Wet op de Orgaandonatie* (Second Evaluation of the Law on Organ Donation) edited by Roland D. Friele, Sjef K.M. Gevers, Remco Coppen, Anke J.G.M. Janssen, Wendy Brouwer, and Richard L. Marquet. Utrecht: Nivel.

Buss, David M. 1987. "Selection, Evocation, and Manipulation." *Journal of Personality and Social Psychology* 53:1214–21.

Callero, Peter L., Judith A. Howard, and Jane A. Piliavin. 1987. "Helping Behavior As Role Behavior: Disclosing Social Structure and History in the Analysis of Prosocial Action." *Social Psychological Quarterly* 50:247–56.

Caplan, Bryan. 2003. "Stigler-Becker Versus Myers-Briggs: Why Preference-Based Explanations Are Scientifically Meaningful and Empirically Important." *Journal of Economic Behavior and Organization* 50:391–405.

Carlo, Gustavo, Nancy Eisenberg, Debra Troyer, Galen Switzer and Anna L. Speer. 1991. "The Altruistic Personality: In What Contexts Is It Apparent?" *Journal of Personality and Social Psychology* 61:450–58.

Cramer, James S. 1991. *The Logit Model: An Introduction for Economists.* London: Edward Arnold.

Davis, Mark H. 1994. *Empathy: A Social Psychological Approach.* Madison, WI: Brown and Benchmark.

Davis, Mark H., Kyle V. Mitchell, Jennifer A. Hall, Jennifer Lothert, Tyra Snapp, and Marnee Meyer. 1999. "Empathy, Expectations, and Situational Preferences: Personality Influences on the Decision to Participate in Volunteer Helping Behaviors." *Journal of Personality* 67:469–503.

De Graaf, Nan Dirk, Paul De Graaf, Gerbert Kraaykamp, and Wout Ultee. 2000. *Family Survey of the Dutch Population, 2000* [MRDF]. Nijmegen: Nijmegen University, Department of Sociology [distributor]. The codebook is available at http://www.niwi.nl/nl/maatschappijwetenschappen/steinmetzarchief/dddi/docs/p1609.pdf/.

Diekmann, Andreas and Peter Preisendörfer. 1998. "Environmental Behavior: Discrepancies Between Aspirations and Reality." *Rationality and Society* 10:79–102.

Drake, Alvin W., Stan N. Finkelstein, and Harvey M. Sapolsky. 1982. *The American Blood Supply.* Cambridge, MA: MIT Press.

Eisenberg, Nancy, Paul A. Miller, Mark Schaller, Richard A. Fabes, Jim Fultz, Rita Shell, and Cindy L. Shea. 1989. "The Role of Sympathy and Altruistic Personality Traits in Helping: A Reexamination." *Journal of Personality* 57:41–67.

Elster, Jon. 1989. *Nuts and Bolts for the Social Sciences.* Cambridge UK: Cambridge University Press.

Epstein, Seymour and Edward J. O'Brien. 1985. "The Person-Situation Debate in Historical and Current Perspective." *Psychological Bulletin* 98:513–37.

Foss, Robert D. 1983. "Community Norms and Blood Donation." *Journal of Applied Social Psychology* 13:281–91.

Gerris, Jan R.M., Tilly M.J.M. Houtmans, Elma M.G. Kwaaitaal-Roosen, J. Clasien Schipper, Ad A. Vermulst, and Jan M.A.M. Janssens.

1998. *Parents, Adolescents and Young Adults in Dutch Families: A Longitudinal Study.* Nijmegen: Institute of Family Studies, University of Nijmegen.

Goeree, Jacob K., Charles A. Holt, and Susan K. Laury. 2002. "Private Costs and Public Benefits: Unraveling the Effects of Altruism and Noisy Behavior." *Journal of Public Economics* 83:255–76.

Goldberg, Lewis R. 1992. "The Development of Markers of the Big-Five Factor Structure." *Psychological Assessment* 4:26–42.

Gouldner, Alvin W. 1960. "The Norm of Reciprocity: A Preliminary Statement." *American Sociological Review* 25:161–78.

Graziano, William G. and Nancy Eisenberg. 1997. "Agreeableness: A Dimension of Personality." Pp. 795–824 in *Handbook of Personality Psychology,* edited by Robert Hogan, John Johnson, and Stephen Briggs. San Diego: Academic Press.

Hauser, Seth M. 2000. "Education, Ability, and Civic Engagement in the Contemporary United States." *Social Science Research* 29:556–82.

Healy, Kieran. 2000. "Embedded Altruism: Blood Collection Regimes and the European Union's Donor Population." *American Journal of Sociology* 105:1633–57.

———. 2004. "Altruism As an Organizational Problem: The Case of Organ Procurement." *American Sociological Review 69:*387–404.

Hertel, Guido and Klaus Fiedler. 1998. "Fair and Dependent Versus Egoistic and Free: Effects of Semantic and Evaluative Priming on the 'Ring Measure of Social Values.'" *European Journal of Social Psychology* 28:49–70.

Hillygus, Sunshine. 2005. "The Missing Link: Exploring the Relationship Between Higher Education and Political Engagement." *Political Behavior* 27:25–47.

Huber, Peter J. 1967. "The Behavior of Maximum Likelihood Estimates Under Non-Standard Conditions." Pp. 221–33 in *Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics Probability,* vol.1, edited by Lucien M. LeCam and Jerzy Neyman. Berkeley: University of California Press.

Jackson, Elton F., Mark D. Bachmeier, James R. Wood, and Elizabeth A. Craft. 1995. "Volunteering and Charitable Giving: Do Religious and Associational Ties Promote Helping Behavior?" *Nonprofit and Voluntary Sector Quarterly* 24:59–78.

Kohn, Alfie. 1990. *The Brighter Side of Nature: Altruism and Empathy in Everyday Life.* New York: Basic Books.

Krahé, Barbara. 1992. *Personality and Social Psychology: Towards a Synthesis.* London: Sage.

Kuhlman, D. Michael and Alfred Marshello. 1975. "Individual Differences in the Game Motives of Own, Relative and Joint Gain." *Journal of Research in Personality* 9:240–51.

Latané, Bibb and John M. Darley. 1970. *The Unresponsive Bystander: Why Doesn't He Help?* New York: Meredith.

Lee, Lichang, Jane A. Piliavin, and Vaughn R.A. Call. 1999. "Giving Time, Money, and Blood: Similarities and Differences." *Social Psychological Quarterly* 62:276–90.

Lenski, Gerhard. 1966. *Power and Privilege : A Theory of Social Stratification.* New York : McGraw-Hill.

Lin, Nan. 2001. *Social Capital: A Theory of Social Structure and Action.* Cambridge, UK: Cambridge University Press.

McClintock, Charles G. and Wim B.G. Liebrand. 1988. "Role of Interdepence Structure, Individual Value Orientation, and Another's Strategy in Social Decision Making: A Transformational Analysis." *Journal of Personality and Social Psychology* 55:396–409.

McCrae, Robert R. and Oliver P. John. 1992. "An Introduction to the Five-Factor Model and Its Applications." *Journal of Personality* 60: 175–215.

Mensch, Karin. 2000. "Niedrigkostensituationen, Hochkostensituationen und Andere Situationstypen: Ihre Auswirkungen auf die Möglichkeit von Rational-Choice-Erklärungen" (Low Cost Situations, High Cost Situations, and Other Types of Situations: Their Effects on the Possibiliy of Rational-Choice Explanations). *Kölner Zeitschrift zur Soziologie und Sozialpsychologie* 52:246–63.

Meslin, Eric and Kimberly Quaid. 2004. *Health Related Philanthropy: The Donation of the Body (and Parts Thereof).* Indianapolis, Indiana University/Purdue University Indianapolis, Department of Bioethics.

Mocan, Naci and Erdal Tekin. 2005. "The Determinants of the Willingness to Be an Organ Donor." Working Paper 11316, National Bureau Of Economic Research, Cambridge MA.

Neuberg, Steven L., Robert B. Cialdini, Stephanie L. Brown, Carol Lucs, and Brad J. Sagarin. 1997. "Does Empathy Lead to Anything More Than Superficial Helping? Comment on Batson et al. (1997)." *Journal of Personality and Social Psychology* 73:510–16.

Oliner, Samuel P. and Pearl M. Oliner. 1988. *The Altruistic Personality: Rescuers of Jews in Nazi Europe.* New York: Macmillan.

Park, Jerry Z. and Christian Smith. 2000. "To Whom Much Has Been Given: Religious

Capital and Community Voluntarism Among Churchgoing Protestants." *Journal for the Scientific Study of Religion* 39:272–86.

Penner, Louis A. 2002. "Dispositional and Organizational Influences on Sustained Volunteerism: An Interactionist Perspective." *Journal of Social Issues* 58: 447–68.

Penner, Louis A. and Marcia A. Finkelstein. 1998. "Dispositional and Structural Determinants of Volunteerism." *Journal of Personality and Social Psychology* 74:525–37.

Penner, Louis A., Barbara A. Fritzsche, J. Philip Craiger, and Tamara S. Freifeld. 1995. "Measuring the Prosocial Personality." Pp. 147–63 in *Advances in Personality Assessment,* vol. 10, edited by Charles D. Spielberger and James N. Butcher. Mahwah, NJ: Erlbaum.

Piliavin, Jane A. and Peter L. Callero. 1991. *Giving Blood: The Development of an Altruistic Identity.* Baltimore: John Hopkins University Press.

Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community.* New York: Simon and Schuster.

Reed, Paul B. and L. Kevin Selbee. 2001. "The Civic Core in Canada: Disproportionality in Charitable Giving, Volunteering, and Civic Participation." *Nonprofit and Voluntary Sector Quarterly* 30:761–80.

Sanders, José. 2003. *Leven Door Geven: Religieuze en Levensbeschouwelijke Standpunten over Orgaandonatie.* (Passing On Life: Religious Beliefs about Organ Donation). Zoetermeer: Meinema.

Simpson, Brent. 2004. "Social Values, Subjective Transformations, and Cooperation in Social Dilemmas." *Social Psychology Quarterly* 67:385–95.

Smith, Vincent H., Michael R. Kehoe, and Mary E. Cremer. 1995. "The Private Provision of Public Goods: Altruism and Voluntary Giving." *Journal of Public Economics* 58:107–26.

Snyder, Mark and William Ickes. 1985. "Personality and Social Behavior." Pp. 883–947 in *Handbook of Social Psychology,* edited by Gardner Lindzey and Elliott Aronson. New York: Random House.

Steblay, N. Mehrkens. 1987. "Helping Behavior in Rural and Urban Environments: A Meta-Analysis." *Psychological Bulletin* 102:346–56.

Stoop, Ineke A.L. 2005. *The Hunt for the Last Respondent: Nonresponse in Sample Surveys.* The Hague: SCP.

Utz, Sonja. 2004. "Self-Activation Is a Two-edged Sword: The Effect of *I* Primes on Cooperation." *Journal of Experimental Social Psychology* 40:769–76.

Van Lange, Paul A.M. 1999. "The Pursuit of Joint Outcomes and Equality in Outcomes: An Integrative Model of Social Value Orientation." *Journal of Personality and Social Psychology* 77:337–49.

———. 2000. "Beyond Self-Interest: A Set of Propositions Relevant to Interpersonal Relations." Pp. 75–104 in *European Review of Social Psychology,* edited by Wolfgang Stroebe and Miles Hewstone. London: Wiley.

Van Lange, Paul A.M., Wilma Otten, Ellen M.N. De Bruin, and Jeffrey A. Joireman. 1997. "Development of Prosocial, Individualistic and Competitive Orientations: Theory and Preliminary Evidence." *Journal Of Personality and Social Psychology* 73:733–46.

Van Lange, Paul A.M., Mark van Vugt, René Bekkers, and Theo N.M. Schuyt. 2003. "From Experimental Games to Prosocial Behavior: Ecological Support for Social Value Orientation." Department of Social Psychology, Free University, Amsterdam. Unpublished manuscript.

Wilson, John and Mark Musick. 1997. "Who Cares? Toward an Integrated Theory of Volunteer Work." *American Sociological Review* 62:694–713.

———. 1999. "Attachment to Volunteering." *Sociological Forum* 14:243–72.

René Bekkers *is an assistant professor in the Department of Sociology, Utrecht University, and researcher at the department of Philanthropy, Vrije Universiteit, Amsterdam. He received the 2005 Gabriel G. Rudney Memorial Award for Outstanding Doctoral Dissertation for his work "Giving and Volunteering in the Netherlands: Sociological and Psychological Perspectives." His current research focuses on effects of education on philanthropy and volunteering.*